Alumni: Our Heritage

See Page Two

the CANNON

October 2, 1980 | University of Toronto Engineering Society | Vol. III No. 2

Fleming nears Completion

Since the night it was gutted by fire in February 1977, the reconstruction of the Sandford Fleming Building has been a major priority in the Faculty. Although work is about three weeks bebind schedule, it appears the building will re-open for lectures and tutorials in the spring term of 1982.

Work is nearing completion in tbe main portion of the building. However, renovations have not yet begun in tbe Burton Wing, the south hall of the building that connects it to the Galbraith Building. Tbis part of Fleming was saved from the flames of the 1977 fire and has remained occupied througb most of the reconstruction. The occupants of the Burton Wing will move to another portion of the building wben renovations start there this December.

Dean Janiscbewskyj, the Faculty official overseeing the reconstruction, explains that althougb it added substantially to tbe cost, the walls of tbe original structure were preserved and the new building was designed to fit within tbese confines. In fact, the University never considered razing the remains in favour of a new building.

Early estimates placed the cost of reconstruction at more than eleven million dollars. More recent figures are not available. Substantial assistance came from the alumni, and the provincial government contributed about a year and a balf into the project.

The original Fleming building had three floors and an attic for storage, which was essentially wasted space. The new design involves four full floors, all usable for lectures or tutorials. Because of the dictates of the existing walls, the fourth floor has no windows, but is illuminated by skylights. The quadrangle has been consumed by office space.

When the building is first reoccupied in late 1981, it will simply be used for classes. Over tbe summer of 1982, otber facilities, such as library boldings and electronic gear, will be moved into place. The building should be fully operational by the start of classes in September 1982.

Work is progressing on the reconstruction of the Sandford Fleming building, destroyed by fire in February 1977. It should be back in use by January 1982.

Several groups will call the new Sandford Fleming Building home. Engineering Science, occupants before the fire, will move into the present offices of Electrical Engineering in Galbraith. Electrical and Civil Engineering and Aerospace will use Fleming, as will tbe Department of Computer Science of the Faculty of Arts and Science, moving from the McLennan Physics Building.

The Engineering Society Offices and Stores will be relocated to spacious new accommodations in the basement.

The list of facilities incorporated into the building is quite exciting. The Engineering Library will also comprise the Forestry Library, the Department of Computer Science Library, and some science holdings will be transferred from Sigmund Samuel.

The large round room at the front of the building will be a 260 seat lecture hall suitable for seminars or conferences, such as tbose which are now beld in the Medical Sciences Auditorium.

The centre core of the building is given to lecture and tutorial rooms, and in tbe north part of the building near Galbraith Road will be a large cafeteria, designed as an atrium. The cafeteria itself is in the basement, and tbe two floors above open onto the cafeteria, giving it a high, airy ceiling. A small lounge is located to one side of the cafeteria.

The second floor will include experimental computer facilities, overseen by the University of Toronto Computing Sevices for Computer Science, Electrical

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This Month

Nuclear Energy
Ontario has the natural and technological resources to successfully develop its nuclear generating capabilities. Realistically, we have little choice not to.
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Incorporation
The Engineering Society hopes to be a corporation by the time elections are held in the spring. So far all systems are go.....page 6

Job Listings
It's that time of year again. Get out your best clothes, get your hair cut, and check the summer job listings.....page 8

Societies Meet in Montreal

The Engineering Society is sending four delegates to this year's Regional Engineering Student Societies Association (RESSA) conference, to be held October 3, 4, and 5. The meeting is bosted by L'Ecole Polytechnique of the University of Montreal.

Eng. Soc. delegates are V.P. Administration John Byrne, Engineering Athletic Association President Dale Kerr, Steve Roberts, leader of the Lady Godiva Memorial Band, and Cannon editor John Voss. The delegates, from Ontario and Quebec, will discuss organizational and administrative difficulties, and ways to overcome them.

Professional Development Committee chairman Nancy Brown says that Eng. Soc. plans to send delegates to at least two other engineering student conferences this year. The University of Guelph is hosting the Association of Professional Engineers of Ontario-Undergraduate Engineering Societies (APEO-UES) conference November 7-9. This conference will focus on the legal implications of professional engineering.

The Canadian Congress of Engineering Students (CCES) conference is scheduled for Queen's University early in the new year. It's theme is "Engineering and Government: The Shaping of Society".

The Engineering Society will probably be represented by four delegates at each of these conferences. Nancy Brown hopes to be able to send two observers to the CCES conference, because the location is nearby. Tbe cost, $100 per observer, may be prohibitive, however.

the CANNON

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THE CANNON is a publication of the University of Toronto Engineering Society. It is published monthly to announce Eng. Soc. events, discuss Faculty and University matters, and present technical information of interest to Engineering undergraduates. Subscriptions are available, call Ella at 978-2917. Anyone interested in helping with THE CANNON is most welcome.

THE CANNON encourages submissions; please type or write legibly. Deadline for articles is one week before publication date, notices and letters by 5:00 p.m. the Friday prior to publication. Comments on THE CANNON or articles appearing in it are appreciated. The editors reserve the right to edit letters for brevity.

Letters

Is it worth it?

This being my fourth year, I followed directions and signed up my name to have my grad photo taken. Then I read the fine print. For the privelege of taking time off my busy schedule to come in wearing a white shirt and a tie to sit to have my picture taken I was expected to pay $12. I was told this was just a sitting fee and unless I paid extra on top of this I would never get a colour print. Why should I pay hard earned cash to have someone take my picture without me getting a copy? Is it worth it?

When my father finished Skule (Eng. Phys. 5T8) he has a graduation photo taken too. They lined up the whole class on the front steps of the Little Red Skulehouse and took one photograph of the whole lot. That process cost him nothing. Black and white prints were then available (for a fee) to those interested. Are individual colour sbots of each member of the class worth the added expense? Is it worth it?

In these days of inflation why aren't student bodies such as Eng. Soc. doing their part to reduce spending, excessive consumerism, and runaway inflation? Why are they pushing more and more extravagant packages and events on us? Grad Ball this year is rumoured to be in the Harbour Castle Hilton with tickets at $75 a couple. Was the Royal York not good enough? Does the event have to be held in an over priced hotel resulting in over priced tickets? Is it worth it?

Sure you say, you only graduate once. What's $12 to have your face in the yearbook? Well with me being an impoverished student $12 is one-third of my weekly budget out of which has to come food and entertainment. And $75 for Grad Ball means I go hungry for two weeks. Is it worth it?

Why is Eng. Soc. pushing the most expensive photo package around? I'm not saying a $12 sitting fee for individual colour prints is over priced for what you get. I merely question if individual colour prints are worth the extra cost over a black and white group photo. I say let's cut out the extravagances and get back to basics. I am boycotting the Eng. Soc. arranged grad photos. Instead I will get my little brother to take a black and white picture with his Kodak. Cost is about $1.00. That is worth it.

Emil Joannou
Eng. Sci. 8T1

And Pages to Go Before I Sleep...

The issue is ready for bed, and frankly so am I. Having written eight pages of copy, I have only *to write an editorial* and *I'm* finished.

I feel strongly about the Cannon. I get a lot of satisfaction from seeing each issue come together. This paper has such a giant potential to be truly interesting and vital, because it fills a real need. While humour publications have their place on campus, we are one of the few engineering societies that attempt to publish an informational journal. But it can't be done by one person.

This issue of the Cannon was written by one person. I got invaluable help from friends in typing and proofreading, and one person came forward since our last issue and offered his help in researching. He did an excellent job gathering the information for our article on Sandford Fleming, and for a feature for next month. None of these people had ever done newspaper work before. In fact, no-one mentioned on the masthead had been involved with a newspaper before the beginning of this school year, myself included.

I hope my duties as editor do not continue to include writing the entire issue. If they do, it will be to my detriment and the Cannon's. What we are trying to do here is important. Please help.

OEDC at Waterloo

The University of Waterloo Engineering Society will host the second annual Ontario Engineering Design Competition. The competition has been expanded from last year's format because of strong interest, and organizers expect more than two hundred people to be involved.

The competition is open to undergraduate engineering students from Ontario universities. Last year's contest, sponsored by Queen's University, drew sixty-nine students vying for prizes in three categories: Industrial, where students offered solutions to problems submitted by industry; Communications, which involved a seminar presentation of an objective view on a technical subject and its social implications; and an open category.

Waterloo's contest will revise and expand these categories. The Entrepreneurial category involves development of a product or process not presently available in Canada, or available only as imported technology. The Corporate category relates directly to last year's Industrial section, and entrants will have nine industry-suggested problems to consider. The Communications section has been renamed Explanatory Communications, and a new topic, Editorial Communications, has been added. This involves presentation of a position paper directed at government or industry, for example, the proposal of a provincial energy strategy.

Organizers are allowing eighteen entries in each of the design categories, and twelve in each communication field. Each entry may consist of four team members.

More information will become available after the Regional Engineering Student Societies Association conference this weekend in Montreal.

Distinguished Alumni

Is there life after school? What happens when an engineering student finally graduates, and leaves the lectures and labs behind? His school days are not forgotten, and be need not sever his ties with Skule.

The Engineering Alumi Association is the body that represents the more than 15,000 living graduates of engineering at the University of Toronto. Although it remains generally unknown to most of the undergraduate population, the functions of the Alumni Association are diverse, and very important, both to the Faculty and to its students.

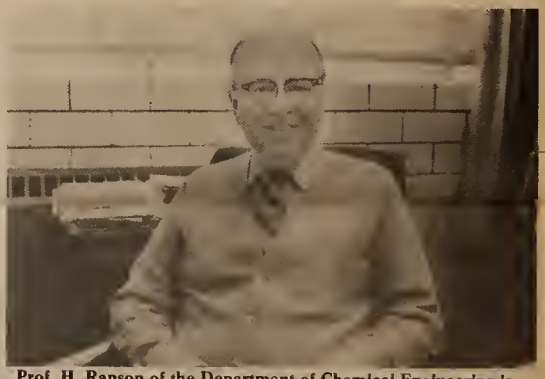
Mr. Jim Horn, Vice President of the association, stresses that their primary goal is to maintain a high quality of education for Toronto's engineering students. They accomplish this in a number of ways.

In these days of difficult financial situations, a prime concern of the Alumni Association is the decay of the Faculty's facilities and equipment. They hope to alleviate this problem, and it is a serious one, through fund-raising programs in industry and by personal contributions. Their help has been very impressive. Figures provided by the Office of Private Funding show that since 1977, the alumni have contributed about $365,000 to the Faculty.

The association also tries to stimutate communication between the Faculty and its members so that both can keep in touch with the activities of the other. To this end, reunions are organized, such as the Alumni Triennial Dinner.

Senior alumni often participate in volunteer work around the university.

Much of the work of the alumni focuses directly on the undergraduate student. They are active in student liaison, through the Undergraduate Relations Chairman Bruce Marler (Eng. Sci. 7T9), organizing career nights, offering counselling for students with questions about career choices, or other post-graduate options. They also support a scholarship and bursary program.



Prof. H. Rapson of the Department of Chemical Engineering is one of the forty accomplished alumni named to the Alumni Hall of Distinction

Mr. Horn feels that the largest difficulty facing his association is the fact that it remains relatively obscure to the undergraduates of the Faculty. Often, he says, new graduates do not know about the Association's activities, and it is sometimes five years or more before they begin to contribute. This is a serious problem, because the University of Toronto Alumni Association (U.T.A.A.) estimates that one-half of the University's living alumni graduated in the last ten to fifteen years. Clearly, the Engineering Alumni Association is missing out on a large portion of its membership if it cannot maintain contact with recent graduates.

Mr. Horn feels that "it is quite phenomenal" the effect our Faculty has had on Canadian, and indeed world society. He points out that the presidents of such influential corporations as the Toronto-Dominion Bank, Dofasco, Stelco, and Shell Canada are all graduates of Skule.

In order to increase awareness of the quality of education at Skule, and the achievements of many of its graduates, the Alumni Association has adopted s its project the establishment of a Hall of Distinction to be included in the Sandford Fleming Building, now being reconstructed. Funding of the Hall, and selection of inductees, is being handled by the association.

Prof. Sam Sandler, Faculty appointed chairman of the Hall of Distinction selection committee, outlined the selection criteria. "Candidates must have obtained their bachelor's degree from the Faculty, or the School of Practical Science, and must have retired from their first professional commitment. In effect, they must be in their second career." The selection committee consists of Prof. Sandler and three alumni members, with the Alumni Association archivist, and the Faculty archivist as ex-officio members.

The committee has met monthly since it was struck in 1977, the year of the fire that destroyed the Fleming Building. It has sought nominations from various sources, and researched the nominees' careers and qualifications. To date, forty alumni have been named to the Hall, and the committee has set a limit of ten inductees a year. a scroll is presented to those selected for the Hall, and it bears a short description of the distinguishing achievements of

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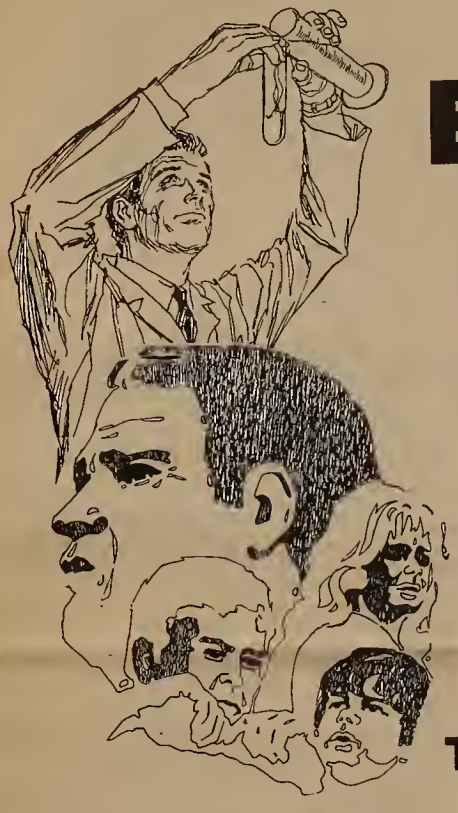

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Nuclear: Our Energy Future

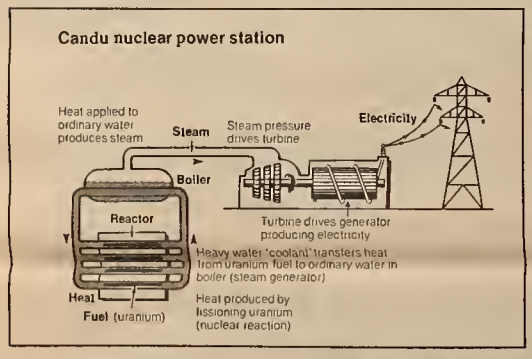
The cost of fossil fuels continues to escalate, and with it, the cost of gas, oil, or coal-fired electrical generating stations. In the perbaps not-too-distant future, the cost of these fuels will be academic. Their importance for uses other than combustion will make them unavailable for many of their present applications.

It is necessary to relieve the demand on fossil fuels wherever possible, and to this end, Ontario Hydro has developed a strong nuclear generating programme. The Candu reactors, unique in their use of natural uranium as fuel and pressurized heavy-water as a moderator, were developed jointly by Ontario Hydro and Atomic Energy of Canada Limited and have established a worldwide reputation for efficiency, safety, and reliability. This report will concentrate on the Pickering Generating Station, Ontario Hydro's most successful nuclear venture.

The steam produced is used to drive steam turbines in exactly tbe same manner as a conventional electrical generating plant. Tbe sole difference is that heat to produce steam is the result of a nuclear fission process rather tban fossil fuel combustion.

The Pickering Nuclear Generating Station consists of four reactors of the type described above for a total rated electrical output of about 2100 MW. Units one and two of Pickering went into service in 1971 and the next two units followed in 1972 and 1973. Presently four new reactors are under construction, scbeduled for completion from 1982 to 1984.

Technicians examine the control panel during construction of Ontario Hydro's Pickering B Generating Station


Candu nuclear power station
Heat applied to ordinary water produces steam
Steam
Steam pressure drives turbine
Electricity
Boiler
Reactor
Turbine drives generator producing electricity
Heavy water 'coolant' transfers heat from uranium fuel to ordinary water in boiler (steam generator)
Heat
Fuel (uranium)
Heat produced by fissioning uranium (nuclear reaction)

Safety

Many impressive and reliable safety systems have been designed into the Candu reactors. The reactor buildings themselves are constructed of concrete, which resists radiation damage, and have walls 1.2 m thick. These are designed to withstand the impact of a jumbo jet crash, a specific design criterion considering the possibility of an airport at Pickering the time the station was built. The reactor building's primary purpose is to contain radioactivity.

Each of the reactor buildings are connected to the vacuum building. This structure is maintained at less than 7 kPa absolute pressure and would serve to suck in the steam released by a reactor coolant piping break. The steam would be condensed by water showering from a nine million litre water tank on the vacuum building roof.

Many citizen groups question the safety and radiation security of nuclear plants. Ontario Hydro studies show that a person encamped at the fence of the Pickering station could expect to receive a radiation exposure roughly equivalent to that received by a passenger on a round trip flight from Toronto to Vancouver. Hydro steadfastly maintains radiation emission levels significantly les than 1% of the legal limit. It is significant to note that no one has ever been killed or injured as a result of working with radiation during the life of Ontario Hydro's nuclear program.

Spent fuel is stored witbin the plant in huge storage bays under many feet of water, an excellent radiation shield. Spent fuel from a Candu reactor is not "waste" *per se*, because it can be upgraded by a process similar to that used by American or European organizations for their new fuel and re-used. Currently, however, spent fuel is simply stored, fresh fuel being more economically obtainable.

Anotber concern among environmentalists is thermal pollution of Lake Ontario from waste heat. Cooling water from the lake returns 11 Celsius degrees warmer than lake temperature. While studies are continuing, one performed for Hydro by the University of Toronto concluded that the total thermal input to Lake Ontario in the form of waste heat from all the electric generating stations projected for the year 2000 would approximate that of one hour of sunshine.

Reactor Design

Candu stands for CANadian Deuterium Uranium. Fuel for a Candu reactor consists simply of ceramic uranium dioxide pellets manufactured from natural uranium, and thus contains more than 99 percent U-238, 0.7 percent U-235 and traces of U-234. The pellets are sbeathed in rods of zirconium alloy, arranged into fuel bundles, twenty-eight rods to a bundle.

The reactor is principally a thirty-five ton stainless steel tank called the calandria. Three hundred and ninety pressure tubes run horizontally through tbe calandria, and it is in these tubes that the fuel bundles are placed.

The U-235 fission process must be controlled, because the neutrons given off may have excess energy, and, hence, be unable to propagate the chain reaction. Some travel as fast as 42,000 km per second. Heavy water is used as a moderator, and tbe fast fission product neutrons are slowed to an appropriate energy to cause another fission by collisions witb the moderator molecules. Their speed is then around 3 km per second. Eacb fission produces two or three neutrons.

Heavy water, pressurized to about 8800 kPa, also serves as a heat transfer fluid. It flows over the heated fuel bundles and carries heat to a boiler, where it gives up its heat to boiling ligbt water. Each fuel bundle produces a heat flux of 600,000 W/m squared on average.

Performance

The most convincing argument in favour of nuclear power is the superior performance of the Candu type reactor. In 1979, four Canadian reactors, three of them at Pickering, ranked among the top ten in the world in performance among reactors of 500 MW or larger. The more indicative statistic, perhaps, is lifetime performance, where Ontario Hydro reactors rank first, third, fourth, fifth, sixth, and seventh among the world's 104 reactors of comparable size.

Economics

Quite simply put, Ontario's nuclear generating capabilities represent millions of dollars in energy savings for Ontario power consumers. A Pickering reactor holds 93,000 kg of nuclear fuel, the energy equivalent of 16,600 rail cars of coal! In 1977, tbe Lennox Generating Station near Kingston burned $513 wortb of oil to produce the same heat as $31 of uranium fuel used at Pickering. Although design and construction costs are significantly greater for a nuclear plant, in 1977 tbe unit cost of electricity produced from Pickering was half that of a coal-fired plant, capital costs included.

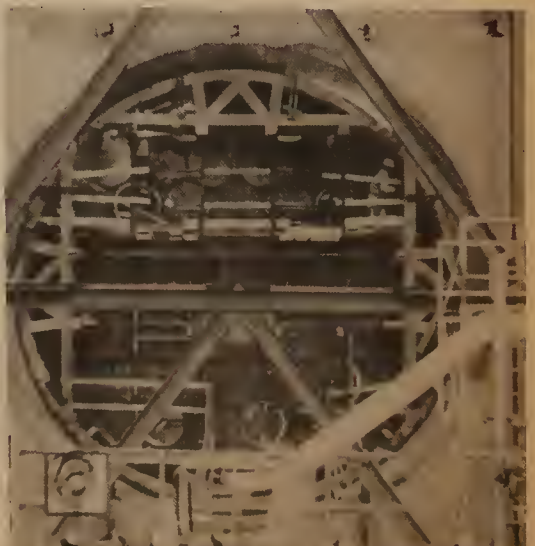
There are other advantages:

- uranium fuel is mined in Ontario, while coal or oil must be purchased from out-of-province
- fossil-fuel combustion produces far more pollution and poses more health risks in terms of daily operation and power production
- nuclear projects create thousands of man-hours of employment
- construction and maintenance expenditures remain largely in Ontario
- the possibility of power exports to the power-hungry northeastern United States could provide a means for economic construction of power plants to meet Ontario's future needs while improving our nation's balance of payments with the U.S.

In fact, energy sales from a 5000 MW plant could produce an eighteen percent return on equity investment in 30 years, and improve Canada's trade deficit by $1.5 billion a year.

The arguments from various anti-nuclear interests persist, however, and it seems few answers based on performance or accurate, dependable study can satisfy them. The most pressing fact is this: our fossil fuel supply is limited and very expensive. Nuclear energy can meet our needs more economically and more cleanly, and alleviate the demand on our hydrocarbon resources. While carbon-based resources have countless thousands of applications in the manufacture of ancillary products such as synthetic materials, or pharmaceuticals, uranium has as its only practical use the production of nuclear generated electricity. We must be selective in our use of fossil fuels, and if they are not necessary for electrical generation, they should not be used. It is important to note that nuclear plants produce a constant power output, and conventional plants will still be required to compensate in high demand periods. Even this will represent a significant continuing demand on these limited resources.

Ontario bas a valuable natural resource in its large uranium deposits, and a superior technological resource in the Candu program. It has been proven effective, economical, and safe. There are no reasons why we should not seize the opportunity to develop our nuclear capabilities. Indeed, we cannot afford not to.



In the event of a reactor coolant leak, these giant louvres open, and the radioactive steam is sucked into the vacuum building.

Sandford Fleming Construction

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Engineering, and themselves. The Engineering Undergraduate Terminal will remain in the Annex, because the Faculty Office wishes to avoid around-the-clock access to the new building.

Dean Janiscbewskyj hopes the new building will boost the spirits of the engineering population, after four years of substandard conditions in the Old Metro Library.

And just what will become of the Library? The University has made a bid to purchase the building from Metro at a cost of just over a million dollars. Because of its historic qualities, the building cannot be demolished, and tentative plans are to renovate the structure and use it as a centre in which to concentrate student services, such as the Placement Centre, Housing Services, Health Services, and the like.

As part of the finishing touches to the Sandford Fleming Building it was decided that the landscaping in front of tbe building on King's College Road should commemorate the old Toronto Magnetic and Meteorological Observatory that stood on the site from 1840 to 1908. Its work was an important contribution to the world's understanding of the earth's magnetic fields, and various groups have been involved in the plans to commemorate the observatory.

Hall Honours Alumni

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each alumnus. The Hall will also display artifacts of its members' careers.

Many undergraduates students would be hard-pressed to name two or three Toronto engineering graduates of note, and yet a look at prof. Sandler's list of forty indicates that these are people who should be known because of their very significant contributions to society.

Among the forty who will be represented in the Hall when it opens are people like H.E. Haultain, who was the first undergraduate president of the Engineering Society and who later became a widely respected professor of Mining Engineering. The Haultain Building, located behind the Mechancial Building, was named for Prof. Haultain. He was chosen for his academic achievements.

Richard L. Hearne was responsible for the design and construction of many of Ontario's electrical generating stations. In fact, the Hearne Generating Station on Lake Ontario is his namesake.

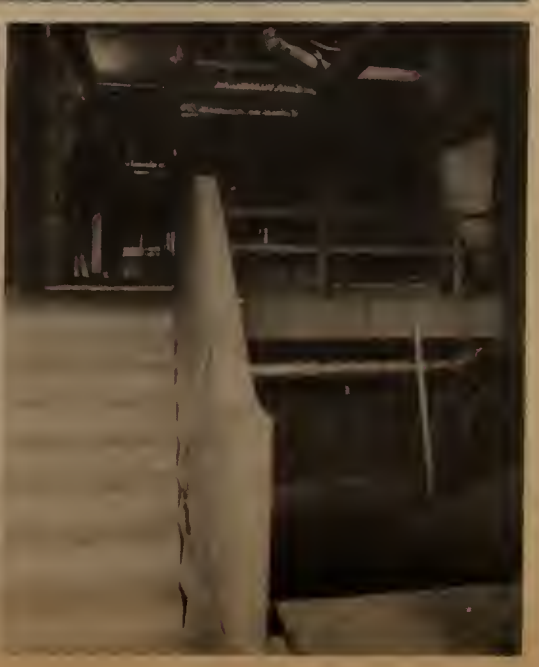
Dr. Elsie McGill is the first woman named to the Hall. Although her bachelor's degree was in Electrical Engineering, Dr. McGill was behind the development of such important World War II aircraft as the "Chipmunk" trainer and the Hawker "Hurricane".

One member of the Faculty has also been chosen as an inductee. Prof. Howard Rapson of the Department of Chemical Engineering is recognized as a world authority in the pulp and paper field and has many awards and honours to his name.

Prof. Sandler explains that in the early years, the selection committee will have to balance its inductions with a large number from the early years in order to recognize all those from the past that are deserving, before catching up to the relatively recent years.

Skule has an impressive heritage. Many of its graduates, many more than the first forty inductees to the Hall of Distinction, have established a world-wide reputation for excellence in engineering from the University of Toronto. It will do many undergraduates a service, and many from beyond the Faculty, to tour the Hall when it opens and to realize just what Skule's contribution to our world has been.

It is also a good idea to consider the alumni in general, and to appreciate the substantial and vital contributions they make to our Faculty, and our education as engineers.



Eng. Soc. News

Eng. Soc. Inc.

Work is proceeding on plans to incorporate the Engineering Society as a legal entity. At its September 16 meeting, Council moved to retain a lawyer to prepare an application for incorporation, and delegated responsibility to prepare an application for the incorporation process to the Constitutional Amendment Committee, chaired by Michael Nettleton.

Nettleton's committee was struck last spring to examine the Society's constitution and determine the revisions necessary to allow for incorporation.

Presently, signing officers of the Engineering Society can personally be held legally liable in the event of action against the Society. An example might be a damages suit brought against the Society for injuries incurred at a Chariot Race. As a corporation, however, the principals of the Society are protected, as only the Society as an organization can be sued, not its members. Vice President-Administration, John Byrne explained that the diverse activities of the Society make incorporation a good idea.

Fortunately, the Engineering Society constitution, last revised in the 1977-78 school year, is well-suited for incorporation. It establishes a strong and clearly defined infrastructure, and provides for good representation on Council from throughout the Society. Some improvements may be necessary, however, in the constitutions of Society affiliates such as the Athletic Association and the course clubs.

The name for the corporation will remain the University of Toronto Engineering Society. Approval has been received from the University for the use of its name, and the Association of Professional Engineers of Ontario has allowed the use of the word "Engineering", conditional to Ontario law that any company with "Engineering" in its title may not engage in professional engineering work or contracting, or seek patents, without having a professional engineer on staff. The Society has guaranteed that it will meet this condition.

John Byrne hopes to see the incorporation process completed hy early in the new year. The fiscal year will be moved from March 31 to the end of February, and hopefully next year's executive can hegin its term as the first Board of Directors.

Toike Discussed

In a meeting held September 25, President David LeGresley, Vice President-Administration John Byrne and members of the Communications committee discussed the editorial structure of the Toike Oike, and the effectiveness of its operation.

In an effort to alleviate some of the large demands on the Toike editor, four people were appointed as co-editors this year. Plans were that each editor would be responsible for one issue per term, thus making it possible to end the tradition that a Toike editor does poorly in academics.

At the time of the meeting, the first issue of the Toike was a week late. The new editorial system was not operating smoothly, and many technical problems had combined to delay

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Selling Skule

The High School Liaison committee has announced preliminary plans for what amounts to an extended public relations campaign. The committee, in co-operation with Dean Martha Leitch of the Faculty's High School Liaison office, is trying to recruit engineering students to serve as ambassadors.

In an expansion on the concept of SAC Preview Days, the committee and the Faculty Office hope to have students available to host high school students on a day's tour of lectures, tutorials and laboratories in a department of a students' interest. The feeling is that limiting these tours to one week in the fall, as the SAC program does, is too restrictive and inconvenient for many high school students. Perhaps, if engineering students are available, high school students will take the opportunity to see what our Faculty is really like.

The project may also include student visits to local high schools. Dean Leitch regularly visits Toronto secondary schools to answer questions on engineering at UofT. Students may soon be accompanying her.

The Faculty Office is currently trying very hard to change the image of engineering as a technological dragon. Joe Facca and Sean Gregorio, HSL Committee co-chairmen, are working on an informational pamphlet on engineering school life for distrihution by Dean Leitch's office.

The Dean has also financed the distribution of copies of the Cannon to local schools. One thousand copies of the September 4 Cannon were distrihuted by High School Liaison, and three thousand of today's issue are also designated for that purpose.

Eng. Soc. and the Nursing Student Council took the Shinerama campaign to the people of Toronto at the September 11 Blue Jays game.

Orientation a Success

The orientation period just passed was certainly the busiest in recent memory. Many new events were added to the September calendar, and most met with general sucess according to Eng. Soc. V.P. Activities Dave Neale.

There was a noted drop-off in participation as the month wore on. Presumably the demands of school precluded the activities of Skule, and Neale thinks that perhaps there were simply too many events planned.

The traditional events, such as the Nursing caper, the scavenger hunt, and Shinerama were slightly better attended than usual. The Shinerama drive raised approxiamtely $5000, despite cold, rainy weather. Some events did not receive a lot of participation, however. "The Surprise pub should have been hilled as the Milk pub it was," says Neale. "Everyone who came expected a real pub, and those who avoided the pub may have enjoyed a milk pub." None-the-less, the one hundred or so who did attend enjoyed themselves, even conducting boat races with a choice of white or chocolate milk.

Eng. Soc. made tickets for a Blue Jays game and an Argonaut game available, but neither game was well attended.

Despite the many events, Neale says that the orientation program was completed with a small budgetary surplus. The events were financed by a portion of the survival kit fees paid by first year students on Orientation Day. This year's fee was $20, $13.50 of which went to orientation. Of the remaining funds, $4.00 goes to a fund to defray costs of Grad Ball 8T4, while $2.50 purchases a yearbook. In a total budget of approximately $11,000 for orientation events, about $300 was unspent.

Neale was also successful in reviving the Homecoming Parade and football game. He had gone to great efforts to convince the Department of Athletics and Recreation to re-schedule a Friday night game to Saturday afternoon. Ed McGibbon, DAR's publicity director, was very pleased with the results of the event, and hopes to see one again next year.

Eleven campus groups participated in the parade, with Knox College winning first place and Engineering placing second in the float judging. Prizes were awarded at a Homecoming Pub, which was both well-attended and financially successful.

Skule's Homecoming float, replete with a Skule Laser Cannon won second place in the parade.

Athletics Start

The interfaculty athletic season is into full swing, and Engineering Athletic Association (E.A.A.) President Dale Kerr reports that Skule looks to be a strong contender in most sports.

In men's sports, the seasons have begun for basketball, football, rugger, soccer, and lacrosse. Engineering teams were champions in lacrosse and finalists in rugger last year. Also on the men's calendar are volleyball, track and field, squash, aquatics, and hockey, and these will be organising in the near future.

Women's athletics were very successful last year, and this should continue. A newly-formed soccer league has started play, as have touch-football and basketball. Skule is the defending women's basketball champion. Swimming, innertube waterpolo, volleyball, badminton, squash, and ice hockey will begin later in the year.

All engineering teams are interested in recruiting players. Especially needed are lower-classmen, first or second years, because tbey have the potential to remain with the team for a few years, adding stability.

Athletics can provide a much needed break from the intellectual demands of the engineering curriculum, and both competitive and recreational sports are available through the E.A.A.

Executive, Dean Meet

Members of the Engineering Society Executive held an informal informational meeting with Dean Slemon on September 10. Tbe purpose of the meeting was to familiarize the executive members of the Society with the Dean, and allow them to seek answers to questions they had about the Faculty. The meeting stretched to nealy two hours, and a number of interesting points were raised.

Dean Slemon is a graduate of the Electrical Engineering class of 4T6. He received his M.A.Sc. from Toronto in 1949 and his Ph. D. from the Imperial College of London. He taught there and at the Nova Scotia Technical College, and worked for Atomic Energy of Canada and Ontario Hydro. He has held a teacbing position at Toronto since 1955, and was cbairman of Electrical Engineering from 1966 to 1976.

The Executive was most interested in Toronto's reputation, in the engineering academic community and in the community-at-large. Dean Slemon feels that our Faculty is highly regarded in the professional community and that we probably rank among the top ten engineering schools on the continent with some departments perbaps among the top five.

Our public image, however, is low. Society generally does not understand engineering, and is, perhaps, fearful of the technological world. It is a serious problem for engineers, tbe Dean feels, and one that must be improved.

The Dean was pleased to report that he had received only one complaint about the Society's orientation activities, that from a motorist delayed on Queen's Park Crescent. The woman was referred to Eng.Soc. president David LeGresley. The Faculty maintains the policy that the Society is responsible and accountable for its actions.

Many of the Society's are brought on itself, because a poor image is created by activities such as the Toike Oike, or the Slave Auctions. The benefits f the Society's spirit and involvement are overshadowed by these other activities, which receive more attention, Dean Slemon said.

One of the most serious problems facing the Faculty is financial restraints imposed by funding cutbacks from the University and the provincial government. Ontario engineering schools receive approximately $4500 per student eacb year in provincial grants. This is about $1000 below the national average. In fact, Ontario's subsidies are the lowest in the country. The Dean pointed out many examples of equipment and facilities that require repair or replacement which simply cannot be afforded presently. While the situation is difficult now, it is not yet crucial and tbe feeling is that the quality of education has not yet suffered. Very serious deficiencies could result in the near future, however.

Dean Slemon feels strongly that the Faculty can look elsewhere for financial relief, namely to industry. He hopes to promote more consulting activity for the Faculty for industry. He has also played a major role in establishing the university's Innovations Foundation.

The Innovations Foundation is an organization wholly owned by the UofT, and run by a board of directors including representatives from industry. Its purpose is to develop products that result from researcb witbin the university for licensing to Canadian manufacturers. Tbe Foundation has been operating for nine months and appears successful.

Both Dean Slemon and members of the executive expressed their pleasure with the outcome of the meeting. The information they gained will give them a much broader perspective in performing their duties, and in dealing with the other.

Eng. Soc., SBS Reach Agreement

Tbe long-standing dispute between the Engineering Society and Steel Breeze Systems has been resolved.

The 1978 Eng. Soc. administration of Rob Yates entered into an agreement with Eric Hartwell (Eng. Soc. 7T6) of Steel Breeze Systems for the design and construction of a text entry and editing system for use with engineering publications. Basically, the system was to serve as an aid to the typesetting process, and improve the efficiency and reduce costs of the Society's publications.

Various production problems were encountered, and last year's Council decided to scrap the project at a loss. V.P.-Administration John Byrne, who as Communication's committee chairman recommended scrapping the system last year, estimates the Society lost approximately $4500 on the project. He is quick to point out, however, that "the costs were paid out of profits from the Engineering Stores in 1978, and have not been passed on to other years or other Councils".

After Council scrapped the system, its manufacturer, Steel Breeze Systems, sought damages and $670 in unpaid labour from the Society. Hartwell argued that termination of the contract made the construction of his prototype impossible and hurt his chances for future business. The Society, in turn, sought the repayment of a $400 floater paid to Hartwell.

The settlement reached this summer calls for the return of the $400 to the Society in exchange for the remaining unsold parts from the system, some integrated circuits and tape drives. The agreement includes apologies from botb parties for damages to reputations that may have resulted from tbe dispute.

Toike

continued from page 6

the issue.

Also discussed at the meeting was the need for update and revision of the Engineering Society's publishing policies. The policy for the Toike Oike was last revised in 1976. Since that time, the Cannon has come into existence, making parts of the Toike policy obsolete. Similarly, the Cannon policy requires major revisions. Because of the constitutional changes made necessary by the Society's efforts to incorporate, many people view this year as an excellent opportunity for bureaucratic "housecleaning".

The committee planned another meeting for October 16, at which time work would begin on the publishing policies.

Engineering This Month

If you are organizing an event, or know of one, that would be of specific interest to Eng. Soc. members, please drop a short note about it in the Tiny Toike box in the Society offices or contact Ella at 978-2917. It will be listed here free of charge. Suitable events might include Eng. Soc. committee meetings, talks, seminars or presentations given on or off campus by University groups or outside organizations.

Thursday, October 2

First Year Seminar
A seminar to be presented today at 1:00 p.m. in Med. Sci. Auditorium will discuss the activities of tbe Departments of Mechanical and Industrial Engineering.

Engineering Volleyball
Organizational meetings will be held for men interested in playing Skule volleyball. Come today at 1:00 p.m. or tomorrow at noon to the Stores. If you can't attend, call Joe at 248-8511.

Tuesday, October 7

Executive Meeting
Eng. Soc. Executive meets at 5:00 p.m. in the North Dining Room of Hart House.

Thursday, October 9

First Year Seminar
In the last of the introductory seminars, Professors Smith, Toguri, and DeLory will discuss the Departments of Chemical Engineering, Metallurgy and Materials Science, and Geological Engineering. Med. Sci Auditorium at 1:00 p.m.

Saturday, October 18

Football Tournament
Eng. Soc. sponsors a recreational football tournament. Why not enter your class? A pub follows at 8:00 p.m. in the U.C. Refectory.

Monday, October 20 to Friday, October 24

Blood Donor Clinic
The annual fall clinic will be held this week. Please give, and help Skule beat Meds again.

Tuesday, October 21

Eng. Soc. Council Meeting
A Full Council meeting is scheduled for 5:00 p.m. in GB 202. All Faculty Council and Eng. Soc. reps please attend.

Thursday, October 23

Faculty Council Meeting
All student Faculty Council reps are asked to attend at 2:00 p.m. in GB202.

Saturday, October 25

Car Rally
The Social Committee's annual rally. Entry fee is $8.00. Sign up in the Engineering Stores on Tuesday, October 21 at 8:15 a.m.

call for 'Labatt's Blue'

Summer Jobs

The jobs listed here are summer employment opportunities. Space does not allow the printing of graduate openings. For more details on the positions available, and for application procedures, contact the Career Counselling and Placement Centre at 344 Bloor St. W. near Spadina.

Amoco Canada Petroleum. Second or third years, all disciplines. Applications at CCPC,deadline October 6.

Atlas Steels. Third year MMS.Applications available at CCPC, deadline October 6.

Playtex Ltd. Third year Chemicals, Electricals, Industrials, Mechanicals. Applications at CCPC, deadline October 6.

Syncrude Canada. Third year Chemicals, Civils, Electricals, Geologicals, Mechanicals, and MMS. Applications at CCPC, deadline October 6.

MacMillan Bloedel Ltd. Second or third year Chemicals and Mechanicals. Applications at CCPC, deadline October 8.

Gulf Canada Resources. Geophysics: Third year Geologicals, Geophysics option. Geological:All levels of Geological. Applications at CCPC, deadline October 9.

Stelco. Third Year MMS. Applications at CCPC. Deadline October 10.

Bell Northern Research. Third year Electricals. Applications available at CCPC, deadline October 17.

Atomic Energy Canada Limited, Chalk River, Ontario. Third years, grads. Applications available at CCPC, deadline November 30.

TOIKE TOIKE

Come on out!!
To the second Toike make-up.
Tomorrow October 3
5:00 p.m. to ∞

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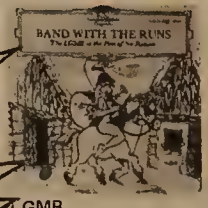

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